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(54) Title: NOVEL MEDICAL USES OF COMPOUNDS SHOWING CB_1-ANTAGONISTIC ACTIVITY AND COMBINATION TREATMENT INVOLVING SAID COMPOUNDS

(57) Abstract: The present invention relates to a novel medical use of compounds with CB_1-receptor activity selected from the group of 4,5-dihydro-1H-pyrazole derivatives, 1H-Imidazole derivatives, thiazole derivatives and/or 1H-1,2,4-triazole-3-carboxamide derivatives, as each defined in the specification, or of a prodrug thereof, a tautomer thereof or a salt thereof, in the manufacture of medicaments for the treatment and/or prophylaxis of CB_1, receptor related diseases in juvenile patients and/or for the treatment and/or prophylaxis of drug induced obesity in juvenile, as well as in adolescent, patients. Furthermore, the invention pertains to the use of said compounds with CB_1-receptor activity in combination with lipase inhibitors. Said compounds are particularly suitable in combination with lipase inhibitors in the manufacture of medicaments for the treatment and/or prophylaxis of obesity in adolescent or in juvenile patients and/or for the treatment and/or prophylaxis of drug induced obesity in juvenile as well as in adolescent patients. Preferred lipase inhibitors are orlistat, panclicins, ATL-962 and/or lipstatin.

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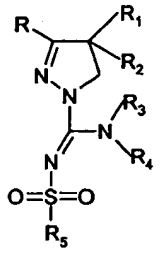
Claims

1. Use of a compound with CB_1-receptor activity of formula (I), (II), (III), (IV) and/or (V), a prodrug thereof, a tautomer thereof or a salt thereof, in the manufacture of medicaments for the treatment and/or prophylaxis of CB_1 receptor related diseases in juvenile patients and/or for the treatment and/or prophylaxis of drug induced obesity in juvenile, as well as in adolescent, patients.

2. Use of a compound with CB_1-receptor activity according to claim 1, wherein the compound with CB_1-receptor activity is selected from the group of 4,5-dihydro-1H-pyrazole derivatives of the formula (I) and/or (III), 1H-Imidazole derivatives of the formula (II), thiazole derivatives of the formula (IV) and/or 1H-1,2,4-triazole-3-carboxamide derivatives of the formula (V), characterized in that:

a) the compounds of formula (I) are



(I)

wherein

- R and R_1 independently represent phenyl, thienyl or pyridyl which groups may be substituted with 1, 2, 3 or 4 substituents Y, which can be the same or different, from the group C_{1-3}-alkyl or alkoxy, hydroxy, halogen, trifluoromethyl, trifluoromethylthio, trifluoromethoxy, nitro, amino, mono- or dialkyl (C_{1-2})-amino, mono- or dialkyl (C_{1-2})-amido, (C_{1-3})-alkyl sulfonyl, dimethylsulfamido, C_{1-3}-alkoxycarbonyl, carboxyl, trifluoromethylsulfonyl, cyano, carbamoyl, sulfamoyl and acetyl, or R and/or R_1 represent naphtyl,
- R_2 represents hydrogen, hydroxy, C_{1-3}-alkoxy, acetyloxy or propionyloxy,
- R_3 represents a hydrogen atom or a branched or unbranched C_{1-8} alkyl group or a C_{3-7} cycloalkyl group which alkyl group or cycloalkyl group may be substituted with a hydroxy group,
- R_4 represents a C_{2-10} branched or unbranched heteroalkyl group, C_{3-8} non-aromatic heterocycloalkyl group or C_{4-10} non-aromatic

heterocycloalkyl-alkyl group which groups contain one or more heteroatoms from the group (O, N, S) or a $-SO_2-$ group, which C_{2-10} branched or unbranched heteroalkyl group, C_{3-8} non-aromatic heterocycloalkyl group or C_{4-10} non-aromatic heterocycloalkyl-alkyl group may be substituted with a keto group, trifluoromethyl group, C_{1-3} alkyl group, hydroxy, amino, monoalkylamino, or dialkylamino group or a fluoro atom, or R_4 represents an amino, hydroxy, phenoxy or benzyloxy group, or R_4 represents a C_{1-8} alkoxy, C_{3-8} alkenyl, C_{5-8} cycloalkenyl or C_{6-9} cycloalkenylalkyl group which groups may contain a sulphur, nitrogen or oxygen atom, a keto group or $-SO_2-$ group, which alkoxy, alkenyl and cycloalkenyl groups may be substituted with a hydroxy group, a trifluoromethyl group, an amino group, a monoalkylamino group or dialkylamino group or a fluoro atom, or R_4 represents a C_{2-5} alkyl group which alkyl group contains a fluoro atom, or R_4 represents an imidazolylalkyl group, benzyl, pyridylmethyl, phenethyl or thienyl group, or R_4 represents a substituted phenyl, benzyl, pyridyl, thienyl, pyridylmethyl or phenethyl group wherein the aromatic rings are substituted with 1, 2 or 3 of the substituents Y, wherein Y has the meaning as indicated above,

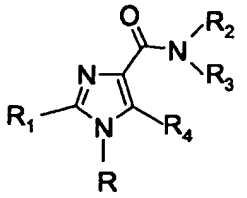
or when R_3 is H or methyl, R_4 may represent a group NR_6R_7 wherein

- R_6 and R_7 are the same or different and represent C_{2-4} alkyl , C_{2-4} trifluoroalkyl

  or R_6 represents a methyl group with the proviso that R_7 represents a C_{2-4} alkyl group, or R_6 and R_7 - together with the nitrogen atom to which they are bonded - form a saturated or unsaturated heterocyclic moiety having 4 to 8 ring atoms which heterocyclic moiety may contain an oxygen or sulphur atom or a keto group or $-SO_2-$ group or an additional nitrogen atom, which saturated or unsaturated heterocyclic moiety may be substituted with a C_{1-4} alkyl group, or
- R_3 and R_4 together with the nitrogen atom to which they are bonded form a saturated or unsaturated, monocyclic or bicyclic heterocyclic moiety having 4 to 10 ring atoms, which heterocyclic moiety may contain one or more atoms from the group (O, N, S) or a keto group or $-SO_2-$ gro up, which moiety may be substituted with a C_{1-4} alkyl, hydroxyalkyl, phenyl, thienyl, pyridyl, amino, monoalkylaminoalkyl, dialkylaminoalkyl, monoalkylamino, dialkylamino, aminoalkyl, azetidinyl, pyrrolidinyl, piperidinyl or hexahydro-1H-azepinyl group,
- R_5 represents benzyl, phenyl, thienyl or pyridyl which may be substituted with 1, 2, 3 or 4 substituents Y, wherein Y has the meaning

as indicated above, which can be the same or different, or R_5 represents C_{1-8} branched or unbranched alkyl, C_{3-8} alkenyl, C_{3-10} cycloalkyl, C_{5-10} bicycloalkyl, C_{6-10} tricycloalkyl or C_{5-8} cycloalkenyl or R_5 represents naphtyl.

b) the compounds of formula (II) are



(II)

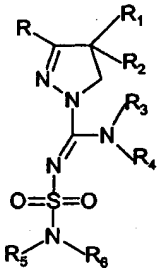
wherein

- R represents phenyl, thienyl, 2-pyridinyl, 3-pyridinyl, 4-pyridinyl, pyrimidinyl, pyrazinyl, pyridazinyl or triazinyl, which groups may be substituted with 1, 2, 3 or 4 substituents Y, which can be the same or different, from the group C_{1-3}-alkyl or alkoxy, hydroxy, halogen, trifluoromethyl, trifluoromethylthio, trifluoromethoxy, nitro, amino, mono- or dialkyl (C_{1-2})-amino, mono- or dialkyl (C_{1-2})-amido, (C_{1-3})-alkoxycarbonyl, carboxyl, cyano, carbamoyl and acetyl, or R represents naphtyl, with the proviso that when R is 4-pyridinyl, R_4 represents a halogen atom or a cyano, carbamoyl, formyl, acetyl, trifluoroacetyl, fluoroacetyl, propionyl, sulfamoyl, methanesulfonyl, methylsulfanyl or branched or unbranched C_{1-4} alkyl group, which C_{1-4} alkyl group may be substituted with 1-3 fluoro atoms or with a bromo, chloro, iodo, cyano or hydroxy group,
- R_1 represents phenyl or pyridinyl, which groups may be substituted with 1-4 substituents Y, which can be the same or different, wherein Y has the above mentioned meaning, or R_1 represents pyrimidinyl, pyrazinyl, pyridazinyl or triazinyl, which groups may be substituted with 1-2 substituents Y, which can be the same or different or R_1 represents a five-membered aromatic heterocyclic ring having one or two heteroatoms from the group (N, O, S), which heteroatoms can be the same or different, which five-membered aromatic heterocyclic ring may be substituted with 1-2 substituents Y, which can be the same or different or R_1 represents naphtyl,
- R_2 represents H, branched or unbranched C_{1-8} alkyl, C_{3-8} cycloalkyl, C_{3-8} alkenyl, C_{5-8} cycloalkenyl which groups may contain a sulfur, oxygen or nitrogen atom,

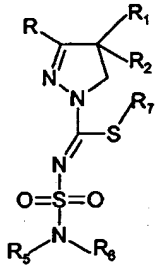
- R_3 represents branched or unbranched C_{2-8} alkyl, C_{1-8} alkoxy, C_{5-8} cycloalkyloxy, C_{3-8} cycloalkyl, C_{5-10} bicycloalkyl, C_{6-10} tricycloalkyl, C_{3-8} alkenyl, C_{5-8} cycloalkenyl, which groups may optionally contain one or more heteroatoms from the group (O, N, S) and which groups may be substituted with a hydroxy group or 1-2 C_{1-3} alkyl groups or 1-3 fluoro atoms, or R_3 represents a benzyl or phenethyl group which aromatic rings may be substituted with 1-5 substituents Z, which can be the same or different, from the group C_{1-3}-alkyl or alkoxy, hydroxy, halogen, trifluoromethyl, trifluoromethylthio, trifluoromethoxy, nitro, amino, mono- or dialkyl (C_{1-2})-amino, mono- or dialkyl (C_{1-2})-amido, (C_{1-3})-alkylsulfonyl, dimethyl-sulfamido, C_{1-3}-alkoxycarbonyl, carboxyl, trifluoromethylsulfonyl, cyano, carbamoyl, sulfamoyl and acetyl, or R_3 represents a phenyl or pyridinyl group, which groups are substituted with 1-4 substituents Z, wherein Z has the meaning as indicated above,
  or R_3 represents a pyridinyl group, or R_3 represents a phenyl group, with the proviso that R_4 represents a halogen atom or a cyano, carbamoyl, formyl, acetyl, trifluoroacetyl, fluoroacetyl, propionyl, sulfamoyl, methanesulfonyl, methylsulfanyl or C_{1-4} alkyl group, which C_{1-4} alkyl group may be substituted with 1-3 fluoro atoms or with a bromo, chloro, iodo, cyano or hydroxy group,
  or R_3 represents a group NR_5R_6 with the proviso that R_2 represents a hydrogen atom or a methyl group, wherein
- R_5 and R_6 are the same or different and represent branched or unbranched
  C_{1-4} alkyl, or R_5 and R_6 - together with the nitrogen atom to which they are bonded - form a saturated or unsaturated, monocyclic or bicyclic heterocyclic group having 4 to 10 ring atoms which heterocyclic group contains one or two heteroatoms from the group (N, O, S), which heteroatoms can be the same or different, which heterocyclic group may be substituted with a C_{1-3} alkyl group or a hydroxy group, or R_2 and R_3 - together with the nitrogen atom to which they are bonded - form a saturated or unsaturated heterocyclic group having 4 to 10 ring atoms which heterocyclic group contains one or two heteroatoms from the group (N, O, S), which heteroatoms can be the same or different, which heterocyclic group may be substituted with a C_{1-3} alkyl group or a hydroxy group,
- R_4 represents a hydrogen or halogen atom or a cyano, carbamoyl, formyl, acetyl, trifluoroacetyl, fluoroacetyl, propionyl, sulfamoyl,

methanesulfonyl, methylsulfanyl or branched or unbranched C_{1-4} alkyl group, which C_{1-4} alkyl group may be substituted with 1-3 fluoro atoms or with a bromo, chloro, iodo, cyano or a hydroxy group,

c) the compounds of formula (III) are



(IIIa)



(IIIb)

wherein

- R and R_1 independently represent phenyl, thienyl or pyridyl which groups may be substituted with 1, 2 or 3 substituents Y, which can be the same or different, from the group C_{1-3}-alkyl or alkoxy, hydroxy, halogen, trifluoromethyl, trifluoromethylthio, trifluoromethoxy, nitro, amino, mono- or dialkyl (C_{1-2})-amino, mono- or dialkyl (C_{1-2})-amido, (C_{1-3})-alkyl sulfonyl, dimethylsulfamido, C_{1-3}-alkoxycarbonyl, carboxyl, trifluoromethylsulfonyl, cyano, carbamoyl, sulfamoyl and acetyl, or R and/or R_1 represent naphtyl,
- R_2 represents hydrogen, hydroxy, C_{1-3}-alkoxy, acetyloxy or propionyloxy,
- R_3 represents a hydrogen atom or a branched or unbranched C_{1-8} alkyl group or a C_{3-7} cycloalkyl group which alkyl group or cycloalkyl group may be substituted with a hydroxy group,
- R_4 represents a hydrogen atom or a branched or unbranched C_{1-8} alkyl, C_{3-8} cycloalkyl, C_{2-10} heteroalkyl, C_{3-8} nonaromatic heterocycloalkyl or C_{4-10} nonaromatic heterocycloalkyl-alkyl moiety which moieties may contain one or more heteroatoms from the group (O, N, S), which moieties may be substituted with a keto group, trifluoromethyl group, C_{1-3} alkyl group, hydroxy, amino, monoalkylamino, or dialkylamino group or a fluoro atom, or R_4 represents an amino, hydroxy, phenoxy or benzyloxy group or R_4 represents a branched or unbranched C_{1-8} alkoxy, C_{3-8} alkenyl, C_{5-8} cycloalkenyl or C_{6-9} cycloalkenylalkyl group which groups may contain a sulphur, nitrogen or oxygen atom, a keto

group or -SO_2- group which C_{1-8} alkoxy, C_{3-8} alkenyl, C_{5-8} cycloalkenyl or C_{6-9} cycloalkenylalkyl groups may be substituted with a hydroxy group, a trifluoromethyl group, an amino group, a monoalkylamino group or dialkylamino group or a fluoro atom, or R_4 represents a phenyl, benzyl, pyridyl, thienyl, pyridylmethyl or phenethyl group wherein the aromatic rings may be substituted with 1, 2 or 3 of the substituents Y, wherein Y has the meaning as indicated above, or

R_4 represents a group NR_8R_9 with the proviso that R_3 represents a hydrogen atom or a methyl group and wherein R_8 and R_9 are the same or different and represent C_{1-4} alkyl or C_{2-4} trifluoroalkyl or R_8 and R_9 - together with the nitrogen atom to which they are bonded - form a saturated or un-saturated heterocyclic moiety having 4 to 8 ring atoms which heterocyclic moiety may contain an oxygen or sulphur atom or a keto group or -SO_2- group or an additional nitrogen atom, which saturated or unsaturated heterocyclic moiety may be substituted with a C_{1-4} alkyl group or

R_3 and R_4 - together with the nitrogen atom to which they are bonded - form a saturated or unsaturated, monocyclic or bicyclic heterocyclic moiety having 4 to 10 ring atoms, which heterocyclic moiety may contain one or more atoms from the group (O, N, S) or a keto group or –SO_2- group, which moiety may be substituted with a C_{1-4} alkyl , hydroxyalkyl, phenyl, thienyl, pyridyl, amino, monoalkylaminoalkyl, dialkylaminoalkyl, monoalkylamino, dialkylamino, aminoalkyl, azetidinyl, pyrrolidinyl, piperidinyl or hexahydro-1H-azepinyl group,

– R_5 and R_6 independently of each other represent a hydrogen atom or a branched or unbranched C_{1-8} alkyl or alkenyl group which groups may contain one or more heteroatoms from the group (O, N, S), a keto group or a –SO_2- group and which groups may be substituted with a hydroxy or amino group, or R_5 and R_6 independently of each other represent a C_{3-8} cycloalkyl group or C_{3-8} cycloalkenyl group which may contain one or more ring heteroatoms from the group (O, N, S) or the –SO_2- group and which groups may be substituted with a hydroxy group, alkyl (C_{1-3}), the –SO_2- group, the keto group, amino group, monoalkylamino group (C_{1-3}) or dialkylamino group (C_{1-3}), or

R_5 represents a naphtyl group or a phenyl group which phenyl group may be substituted with 1, 2 or 3 substituents Y wherein Y has the meaning as described hereinabove, with the proviso that R_6 represents a hydrogen atom, or a branched or unbranched alkyl group (C_{1-5}) which alkyl group may contain one or more heteroatoms from the

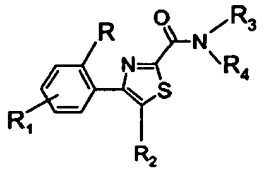
group (O, N, S) or the $-SO_2-$ group and which alkyl group may be substituted with a hydroxy, keto or amino group, or

R_5 and R_6 - together with the nitrogen atom to which they are bonded - form a monocyclic, bicyclic or tricyclic alkyl or alkenyl group which may contain ring heteroatoms from the group (O, N, S), the keto or the SO_2 group and which monocyclic, bicyclic or tricyclic alkyl or alkenyl group may be substituted with a hydroxy group, alkyl (C_{1-3}) group, SO_2 group, keto group, amino group, monoalkylamino group (C_{1-3}), dialkylamino group

(C_{1-3}), pyrrolidinyl group or piperidinyl group, which monocyclic, bicyclic or tricyclic alkyl or alkenyl group may contain an annelated phenyl group which annelated phenyl group may be substituted with 1 or 2 substituents Y, wherein Y has the meaning as described herein above,

- R_7 represents branched or unbranched C_{1-3} alkyl,

d) the compounds of formula (IV) are



(IV)

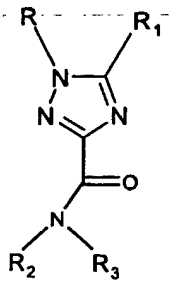
wherein

- R represents a hydrogen atom or a substituent X from the group branched or unbranched C_{1-3}-alkyl or alkoxy, hydroxy, halogen, trifluoromethyl, trifluoromethylthio, trifluoromethoxy, nitro, amino, mono- or dialkyl (C_{1-2})-amino, mono- or dialkyl (C_{1-2})-amido, branched or unbranched (C_{1-3})-alkoxycarbonyl, trifluoromethylsulfonyl, sulfamoyl, branched or unbranched alkyl(C_{1-3})sulfonyl, carboxyl, cyano, carbamoyl, branched or unbranched dialkyl(C_{1-3}) aminosulfonyl, branched or unbranched monoalkyl(C_{1-3})-aminosulfonyl and acetyl,
- R_1 is a hydrogen atom or represents 1-4 substituents X, wherein X has the abovementioned meaning,
- R_2 represents a phenyl, thienyl, pyridyl or pyrimidinyl group, which groups may be substituted with 1-4 substituents X, wherein X has the abovementioned meaning or R_2 represents naphtyl,
- R_3 represents a hydrogen atom or a branched or unbranched C_{1-10} alkyl or cycloalkyl-alkyl group or a phenyl, benzyl or phenethyl group which aromatic rings may be substituted with 1-5 substituents Z, which

can be the same or different, from the group branched or unbranched C_{1-3}-alkyl or alkoxy, hydroxy, halogen, trifluoromethyl, trifluoromethylthio, trifluoromethoxy, nitro, amino, mono- or dialkyl (C_{1-2})-amino, mono- or dialkyl (C_{1-2})-amido, branched or unbranched (C_{1-3})-alkylsulfonyl, dimethylsulfamido, branched or unbranched C_{1-3}-alkoxycarbonyl, carboxyl, trifluoromethylsulfonyl, cyano, carbamoyl, sulfamoyl and acetyl, or R_3 represents a pyridyl or thienyl group,

- R_4 represents branched or unbranched C_{1-10} alkyl or cycloalkyl-alkyl group, branched or unbranched C_{1-10} alkoxy, C_{3-8} cycloalkyl, C_{5-10} bicycloalkyl, C_{6-10} tricycloalkyl, branched or unbranched C_{3-10} alkenyl, C_{5-8} cycloalkenyl, which groups may contain one or more heteroatoms from the group (O, N, S) and which groups may be substituted with a hydroxy group, 1-3 methyl groups, an ethyl group or 1-3 fluoro atoms, or R_4 represents a phenyl, benzyl or phenethyl group which aromatic rings may be substituted with 1-5 substituents Z, wherein Z has the abovementioned meaning, or R_4 represents a pyridyl or thienyl group, or R_4 represents a group NR_5R_6 wherein
  R_5 and R_6 together with the nitrogen atom to which they are attached form a saturated or unsaturated, monocyclic or bicyclic, heterocyclic group having 4 to 10 ring atoms, which heterocyclic group contains one or more heteroatoms from the group (O, N, S) and which heterocyclic group may be substituted with a branched or unbranched C_{1-3} alkyl, hydroxy or trifluoromethyl group or a fluoro atom, or
- R_3 and R_4 – together with the nitrogen atom to which they are attached - form a saturated or unsaturated, monocyclic or bicyclic, heterocyclic group having 4 to 10 ring atoms, which heterocyclic group contains one or more heteroatoms from the group (O, N, S) and which heterocyclic group may be substituted with a branched or unbranched C_{1-3} alkyl, hydroxy or trifluoromethyl group or a fluoro atom,

e) the compounds of formula (V) are



(V)

wherein

- R and R_1 independently represent a phenyl, naphtyl, thienyl, pyridyl, pyrimidyl, pyrazinyl, pyridazinyl or triazinyl group, which groups may be substituted with 1-4 substituents X, which can be the same or different, from the group branched or unbranched (C_{1-3})-alkyl or alkoxy, hydroxy, halogen, trifluoromethyl, trifluoromethylthio, trifluoromethoxy, nitro, amino, mono- or dialkyl (C_{1-2})-amino, mono- or dialkyl (C_{1-2})-amido, (C_{1-3})-alkoxycarbonyl, trifluoromethylsulfonyl, sulfamoyl, (C_{1-3})-alkylsulfonyl, carboxyl, cyano, carbamoyl, (C_{1-3})-dialkylaminosulfonyl, (C_{1-3})-monoalkylamino-sulfonyl and acetyl,
- R_2 represents a hydrogen atom or a branched or unbranched C_{1-8} alkyl or C_{1-8} cycloalkyl-alkyl group or a phenyl, benzyl or phenethyl group which aromatic rings may be substituted with 1-4 substituents X, wherein X has the meaning as indicated above, or R_2 represents a pyridyl or thienyl group,
- R_3 represents branched or unbranched C_{1-8} alkyl, C_{1-8} alkoxy, C_{3-8} cycloalkyl, C_{5-10} bicycloalkyl, C_{6-10} tricycloalkyl, C_{3-8} alkenyl, C_{5-8} cycloalkenyl, which groups may optionally contain one or more heteroatoms from the group (O, N, S), which groups may be substituted with a hydroxy group, an ethynyl group or 1-3 fluoro atoms, or R_3 represents a phenyl, benzyl or phenethyl group which aromatic rings may be substituted with 1-4 substituents X, wherein X has the meaning as indicated above, or R_3 represents a pyridyl, pyrimidyl, pyrazinyl, pyridazinyl, triazinyl or thienyl group which heteroaromatic rings may be substituted with 1-2 substituents X, wherein X has the meaning as indicated above, or R_3 represents a group NR_4R_5 wherein
  R_4 and R_5, together with the nitrogen atom to which they are bonded, form a saturated or unsaturated, monocyclic or bicyclic, heterocyclic moiety having 4 to 10 ring atoms, which heterocyclic group contains

one or two heteroatoms from the group N, O or S, which heteroatoms can be the same or different, which heterocyclic moiety may be substituted with a branched or unbranched C_{1-3} alkyl, hydroxy or trifluoromethyl group or a fluoro atom, or

- R_2 and R_3, together with the nitrogen atom to which they are bonded, form a saturated or unsaturated, monocyclic or bicyclic, heterocyclic moiety having 4 to 10 ring atoms, which heterocyclic group contains one or two heteroatoms from the group N, O or S, which heteroatoms can be the same or different, which heterocyclic moiety may be substituted with a branched or unbranched C_{1-3} alkyl, hydroxy, piperidinyl or trifluoromethyl group or a fluoro atom.

3. Use of a compound with CB_1-receptor activity according to anyone of the claims 1 to 2, or a prodrug, tautomer or salt thereof, wherein the use is in the manufacture of a medicament for pediatric treatment and/or prophylaxis pertaining to psychiatric disorders such as psychosis, anxiety, depression, attention deficits, memory disorders, cognitive disorders, appetite disorders, obesity, addiction, appetence, drug dependence and neurological disorders such as neurodegenerative disorders, dementia, dystonia, muscle spasticity, tremor, epilepsy, multiple sclerosis, traumatic brain injury, stroke, Parkinson's disease, Alzheimer's disease, epilepsy, Huntington's disease, Tourette's syndrome, cerebral ischemia, cerebral apoplexy, craniocerebral trauma, stroke, spinal cord injury, neuroinflammatory disorders, plaque sclerosis, viral encephalitis, demyelinisation related disorders, as well as for the pediatric treatment of pain disorders, including neuropathic pain disorders, and other diseases involving cannabinoid neurotransmission, including the pediatric treatment of septic shock, glaucoma, cancer, diabetes, emesis, nausea, asthma, respiratory diseases, gastrointestinal disorders, gastric ulcers, diarrhea and cardiovascular disorders.

4. Use of a compound with CB_1-receptor activity according to anyone of the claims 1 to 3, or a prodrug, tautomer or salt thereof, preferably of a CB_1 receptor antagonistic compound or a prodrug, tautomer or salt thereof, wherein the use is in the manufacture of a medicament for the treatment and/or prophylaxis of obesity in juvenile patients and/or drug induced obesity in juvenile, as well as adolescent, patients.

5. Use of a compound with CB_1-receptor activity as defined in claim 2, or a prodrug, tautomer or salt thereof, preferably of a CB_1 receptor antagonistic compound or a prodrug, tautomer or salt thereof, in combination with at least

one lipase inhibiting compound in the manufacture of a medicament for the treatment and/or prophylaxis of obesity in adolescent or in juvenile patients and/or drug induced obesity in juvenile, as well as adolescent, patients.

6. Use of a compound with CB_1-receptor activity according to claim 5, wherein the compound with CB_1-receptor activity or a prodrug, tautomer or salt thereof, preferably the CB_1 receptor antagonistic compound or a prodrug, tautomer or salt thereof, is used in combination with at least one lipase inhibiting compound selected from the group of lipase inhibiting polymers, orlistat, panclicins, ATL-962 and lipstatin.

7. A pharmaceutical composition containing at least one compound with CB_1-receptor activity of formula (I), (II), (III), (IV) and/or (V), or a prodrug, tautomer or salt thereof, as an active component suited for the treatment and/or prophylaxis of CB_1 receptor related diseases in juvenile patients and/or for the treatment and/or prophylaxis of drug induced obesity in juvenile, as well as in adolescent, patients.

8. A pharmaceutical composition according to claim 7, wherein the compound with CB_1-receptor activity is selected from the group of 4,5-dihydro-1H-pyrazole derivatives of the formula (I) and/or (III), 1H-Imidazole derivatives of the formula (II), thiazole derivatives of the formula (IV) and/or 1H-1,2,4-triazole-3-carboxamide derivatives of the formula (V), as each defined in claim 1 or 2.

9. A pharmaceutical composition according to anyone of the claims 7 to 8, wherein the at least one compound with CB_1-receptor activity of formula (I), (II), (III), (IV) and/or (V), or a prodrug, tautomer or salt thereof, is present in an amount effectively suited for pediatric treatment and/or prophylaxis pertaining to psychiatric disorders such as psychosis, anxiety, depression, attention deficits, memory disorders, cognitive disorders, appetite disorders, obesity, addiction, appetence, drug dependence and neurological disorders such as neurodegenerative disorders, dementia, dystonia, muscle spasticity, tremor, epilepsy, multiple sclerosis, traumatic brain injury, stroke, Parkinson's disease, Alzheimer's disease, epilepsy, Huntington's disease, Tourette's syndrome, cerebral ischemia, cerebral apoplexy, craniocerebral trauma, stroke, spinal cord injury, neuroinflammatory disorders, plaque sclerosis, viral encephalitis, demyelinisation related disorders, as well as for the pediatric treatment of pain disorders, including neuropathic pain disorders, and other diseases involving cannabinoid neurotransmission, including the pediatric

treatment of septic shock, glaucoma, cancer, diabetes, emesis, nausea, asthma, respiratory diseases, gastrointestinal disorders, gastric ulcers, diarrhea and cardiovascular disorders, in a juvenile patient in need of such treating.

10. A pharmaceutical composition according to anyone of the claims 7 to 9, wherein the at least one compound with CB_1-receptor activity of formula (I), (II), (III), (IV) and/or (V), or a prodrug, tautomer or salt thereof, preferably the CB_1 receptor antagonistic compound or a prodrug, tautomer or salt thereof, is present in an amount effectively suited for the treatment and/or prophylaxis of obesity in juvenile patients and/or drug induced obesity in juvenile, as well as adolescent, patients.

11. A pharmaceutical composition containing as active components at least one compound with CB_1-receptor activity as defined in claim 2, or a prodrug, tautomer or salt thereof, preferably a CB_1 receptor antagonistic compound or a prodrug, tautomer or salt thereof, and at least one lipase inhibiting compound for the treatment and/or prophylaxis of obesity in adolescent or in juvenile patients and/or drug induced obesity in juvenile, as well as adolescent, patients.

12. A pharmaceutical composition according to claim 11, containing the at least one compound with CB_1-receptor activity or a prodrug, tautomer or salt thereof, preferably the CB_1 receptor antagonistic compound or a prodrug, tautomer or salt thereof, in combination with at least one lipase inhibiting compound selected from the group of lipase inhibiting polymers, orlistat, panclicins, ATL-962 and lipstatin.

13. A pharmaceutical composition according to any of the claims 10 to 12, wherein the at least one compound with CB_1-receptor activity, or a prodrug, tautomer or salt thereof, preferably the CB_1 antagonistic compound having a formula (I), (II), (III), (IV) or (V) as defined in claim 2, or the prodrug, tautomer or salt thereof, and the at least one lipase inhibiting compound each are present in an amount effectively suited for the treatment and/or prophylaxis of obesity in a juvenile patient in need of such treating.

14. A pharmaceutical composition according to any of the claims 10 to 12, wherein the at least one compound with CB_1-receptor activity, or a prodrug, tautomer or salt thereof, preferably the CB_1 antagonistic compound having a formula (I), (II), (III), (IV) or (V) as defined in claim 2, or the prodrug, tautomer

or salt thereof, and the at least one lipase inhibiting compound each are present in an amount effectively suited for the treatment and/or prophylaxis of drug induced obesity in juvenile, as well as adolescent, patients in need of such treating.

15. A method of treatment and/or prophylaxis of CB_1 receptor related diseases in juvenile patients and/or for the treatment and/or prophylaxis of drug induced obesity in juvenile, as well as in adolescent, patients, characterized in that at least one compound with CB_1-receptor activity of formula (I), (II), (III), (IV) and/or (V), a prodrug thereof, a tautomer thereof or a salt thereof, as defined in claim 2 is administered to a patient in need of such treating.

16. A method of treatment and/or prophylaxis according to claim 15, wherein treatment and/or prophylaxis is directed to a pediatric treatment and/or prophylaxis pertaining to psychiatric disorders such as psychosis, anxiety, depression, attention deficits, memory disorders, cognitive disorders, appetite disorders, obesity, addiction, appetence, drug dependence and neurological disorders such as neurodegenerative disorders, dementia, dystonia, muscle spasticity, tremor, epilepsy, multiple sclerosis, traumatic brain injury, stroke, Parkinson's disease, Alzheimer's disease, epilepsy, Huntington's disease, Tourette's syndrome, cerebral ischemia, cerebral apoplexy, craniocerebral trauma, stroke, spinal cord injury, neuroinflammatory disorders, plaque sclerosis, viral encephalitis, demyelinisation related disorders, as well as for the pediatric treatment of pain disorders, including neuropathic pain disorders, and other diseases involving cannabinoid neurotransmission, including the pediatric treatment of septic shock, glaucoma, cancer, diabetes, emesis, nausea, asthma, respiratory diseases, gastrointestinal disorders, gastric ulcers, diarrhea and cardiovascular disorders.

17. A method of treatment and/or prophylaxis according to anyone of the claims 15 or 16, wherein the treatment and/or prophylaxis is directed to obesity in juvenile patients and/or drug induced obesity in juvenile, as well as adolescent, patients.

18. A method of treatment and/or prophylaxis of obesity in adolescent or in juvenile patients and/or of drug induced obesity in juvenile, as well as adolescent, patients, characterized in that at least one compound with CB_1-receptor activity as defined in claim 2, or a prodrug, tautomer or salt thereof, preferably a CB_1 receptor antagonistic compound or a prodrug, tautomer or salt thereof, is administered in combination with at least one lipase inhibiting

compound to a patient in need of such treating.

19. A method of treatment and/or prophylaxis according to claim 18, characterized in that the at least one compound with CB_1-receptor activity or a prodrug, tautomer or salt thereof, preferably the CB_1 receptor antagonistic compound or a prodrug, tautomer or salt thereof, is administered in combination with at least one lipase inhibiting compound selected from the group of lipase inhibiting polymers, orlistat, panclicins, ATL-962 and lipstatin.

20. A method of treatment and/or prophylaxis according to any of the claims 15 to 19, characterized in that the treating is directed to obesity in juvenile patients.

21. A method of treatment and/or prophylaxis according to any of the claims 15 to 19, characterized in that the treating is directed to drug induced obesity in juvenile or adolescent patients.

22. A method of treatment and/or prophylaxis according to any of the claims 15 to 21, characterized in that the compound with CB_1-receptor activity or a prodrug, tautomer or salt thereof, preferably the CB_1 receptor antagonistic compound or a prodrug, tautomer or salt thereof, is administered in combination with the lipase inhibiting compound by simultaneous, separate or step-wise administration route.

23. Pharmaceutical product containing as a medicament at least one compound with CB_1-receptor activity having formula (I), (II), (III), (IV) or (V) as defined in claim 2, or a prodrug, tautomer or salt thereof, preferably a CB_1 receptor antagonistic compound or a prodrug, tautomer or salt thereof, as a combination preparation with at least one lipase inhibiting compound for simultaneous, separate or step-wise administration in the treatment and/or prophylaxis of obesity.

24. Pharmaceutical product containing as a medicament at least one compound with CB_1-receptor activity having formula (I), (II), (III), (IV) or (V) as defined in claim 2, or a prodrug, tautomer or salt thereof, preferably a CB_1 receptor antagonistic compound or a prodrug, tautomer or salt thereof, and a leaflet indicating that said compound with CB_1-receptor activity, preferably the CB_1 antagonistic compound, may be administered in combination with a lipase inhibiting compound for simultaneous, separate or step-wise administration in the treatment and/or prophylaxis of obesity.

25. A compound with CB_1-receptor activity having one of the formulas (I), (II), (III), (IV) or (V) as defined in claim 2, or a prodrug, tautomer or salt thereof, preferably of a CB_1 receptor antagonistic compound or a prodrug, tautomer or salt thereof, in combination with at least one lipase inhibiting compound.

26. A combination according to claim 26 of a compound with CB_1-receptor activity having one of the formulas (I), (II), (III), (IV) or (V) as defined in claim 2, wherein the compound with CB_1-receptor activity or a prodrug, tautomer or salt thereof, preferably the CB_1 receptor antagonistic compound or a prodrug, tautomer or salt thereof, is in combination with at least one lipase inhibiting compound selected from the group of lipase inhibiting polymers, orlistat, panclicins, ATL-962 and lipstatin.